MCC 5500 DISPATCH CONSOLE

Ship Card

General Information

Motorola Solutions MCC 5500 Dispatch Console is a full-featured conventional radio system dispatch console designed to handle dispatch requirements for small to medium sized communication centers. It is a PC-based console that seamlessly integrates radio, paging, and telephony allowing dispatch operators to effectively manage and communicate more effectively with field personnel over numerous channels in a wide area system.

The MCC 5500 is a digital, modular radio dispatch console with an easy-to-use graphical user interface (GUI) running under Microsoft Windows 7 (32-bit) with SP1. Each console system can support up to 36 dispatch operator positions and 128 resources (radio channels and analog telephone lines). The maximum number of telephone lines supported is 72 (2 per CES shelf).

The MCC 5500 Dispatch Console allows users to:

- Control conventional, digital, and mobile radio channels
- Receive and make calls on regular telephone lines
- Use the Call Director to route telephone calls to a headset
- Send pages, either through an internal paging encoder or optional external encoder
- Operate a voter/comparator system by receiving comparator audio and by providing status and control to each receiver
- Decode and dispatch Push-To-Talk (PTT) identifications with Stat-Alert (MDC-1200), ASTRO, GE-STAR, DTMF, and iDEN signaling systems.

SUPPORTED CONVENTIONAL RADIO SYSTEMS:

- Stat-Alert (MDC-1200)
- Securenet (code/clear only)
- GE-STAR
- ASTRO 25 Conventional (P25 Compliant - digital)

The MCC 5500 Dispatch Console supports a variety of trunked radio systems as a wireless console using mobile radios as control stations. In most cases, MCC 5500 dispatch operators can access the full set of features supported on the mobile radio unit, but with the mobile radio located where needed for proper RF coverage.

SUPPORTED WIRELESS CONSOLE INTERFACE:

- SMARTNET
- SmartZone
- SmartZone Omnilink
- ASTRO 25 Trunking
- PassPort/LTR Trunking
- iDEN

Functionality as a wireless console is dependent upon the method of interface and radio. The main choices of a wireless console interface are:

- TRC - provides limited functionality within the system
- Serial Link - ASTRO radio only (ASTRO Consolette W7 model and APX 7500 Consolette) - provides PTT ID, Emergency Call.

- NOTE: The APX 7500 Consolette provides additional features beyond PTT ID and Emergency Call. Refer to MCC 5500 Dispatch Console Product Planner for more details.
- SB9600 - provides full control of the radio.

CONSOLE ADD-ON OPTIONS:

The MCC 5500 dispatch console can integrate with other control room operations such as:

- Instant Recall Recorder (IRR)
- VESTA Pallas E-9-1-1
- MOSCAD Fire Station Alerting (FSA)

MCC 5500 DISPATCH CONSOLE KEY COMPONENTS:

1. **Dispatch Operator Position** - PC, Dispatch Application Program, Console Audio Box (CAB), Operator Accessories
2. **Backroom Electronics** - Console Electronic Shelf (CES), Console Processor (COP), Digital Audio Processor (DAP II) Modules, I/O Shelf.
3. **System Management Software** Console System Database Manager (CSDM) program and Alias Database Manager (ADM) program

Dispatch Operator Position - The MCC 5500 dispatch operator position is the interface between the dispatcher and the console system. Each operator position consists of PC, dispatch application program, CAB, and operator accessories. The operation is controlled via a mouse and/or touch screen monitor. It provides a means for a dispatcher to communicate to field units and telephone caller. It also allows dispatchers to control and monitor multiple channels of radio activity, patch various channels together, and send pages. Each operator position is connected to a CAB and CES.

Workstation - The MCC 5500 dispatch operator positions are Window 7-certified Pentium workstations. Each workstation connects to a CAB. The workstations do not come with monitors; these must be ordered separately. NOTE: The use of multi-touch monitors with MCC 5500 Dispatch Console is not supported.

NOTE: Motorola will no longer be shipping NEW workstations with Vista OS (TT2289) for the MCC 5500 Dispatch Console (Operator Position and CSDM). New workstations (TT2537) ordered for the MCC 5500 Dispatch Console (Operator Position and CSDM) will ship with Window 7 OS.

Dispatch Application Program - features an intuitive, easy-to-use Graphical User Interface (GUI) that runs under Microsoft Windows 7 (32-bit) with SP1 operating system utilizing the industry standard PC platform. The GUI is extremely flexible and can be tailored to any given operation and can be configured on a per operator basis.

CAB - provides the interface between the MCC 5500 dispatcher PC and CES. It is the connection point for the operator accessories. There is one CAB per console position. The CAB uses an external power supply (similar to the power supplies used with laptop computers) which must be connected to an AC power source. Power is provided by a single 120/240Vac, 50/60Hz external power supply. The CAB connects to the CES using either a 50' or 100' cable. However, there are many cases when other lengths are more suitable, in these instances the project team would obtain a cable independently. The maximum cable length supported is 4000'. For cable specification please consult the MCC 5500 Product Planner.

Operator Accessories - Operator accessories are sold separately from CAB.

- ***Desktop Speakers*** *(required) - at least 2 external speakers at each OP (select and unselect), up to 6 monitor speakers can be connected to each CAB.*
- ***Microphones*** *(at least one is required) - MCC Series Desktop Gooseneck Microphone w/PTT at the base or Standard Gooseneck Microphone.*
- ***Headset Jack Box*** *(optional) - supports up to 2, required for headset operation.*
- ***Headsets*** *(optional) - requires headset jack box.*

- ***Dual-Pedal Foot Switch*** *(optional)*
- ***Instant Recall Recorder (IRR)*** *(optional)*

Backroom Electronics - consists of one or more CESs with interface cards. Each CES shelf contains a COP, up to three DAP II modules, power supply, optional: dual telephone interface (2 CO) and connection to two I/O shelves.

CES Shelf - consists of console processor (COP) module to manage communications and digital audio processor (DAP) modules to interface external analog circuits. The module facilitate communications between console operators, radio channels, voice recorders, and any other external device connected to the console.

COP Module - it executes the main operating system including the call processing software.

DAP II Module - is designed to interface with radio channels. Each DAP II module is capable of supporting up to four channels if it is equipped with the licensing iButtons required to enable all the channels. By default the DAP II module contains NO iButtons and supports two conventional analog channels. A DAP II module can be equipped to support any combination of two models:

- Four Analog channels
- Four Mobile (SB9600) channels
- Four Digital channels
- Four iDEN channels
- Two Analog and two Mobile (SB9600) channels
- Two Analog and two Digital channels
- Two Digital and two Mobile (SB9600) channels
- Two Analog and two iDEN channels
- Two Digital and two iDEN channels
- Two Mobile (SB9600) and two iDEN channels

I/O Shelf - can be used for voting comparators, remote operation of doors, alarms, Main/Standby operation and visual indicators from the console control at the MCC 5500 operator position. Each MCC 5500 dispatch console supports up to two fully configured I/O shelves with four I/O module cards each, for a total of 48 relay contacts and 96 opto-coupled inputs. Each CES has two I/O connectors, each of these connectors can support one I/O shelf with up to four modules in it. The basic shelf includes the processor card and the first I/O module. Three additional modules can be ordered as options to the I/O shelf. The I/O shelf is rack-mountable.

System Management Software - consists of the Console System Database Manager (CSDM) and Alias Database Manager (ADM).

CSDM - a powerful configuration and maintenance tool for the MCC 5500 dispatch console and is a requirement for every customer site. The CSDM is used to configure an MCC 5500 dispatch console system, to access the customer configuration database, to upgrade software, to monitor the system, and to troubleshoot console problems. The CSDM is located on a dedicated PC that runs Windows 7 (32-bit) SP1 operating system. The CSDM terminal is located in the backroom.

ADM - is a program for managing centralized server-based access to Caller ID aliases. The ADM provides simple aliasing of radio unit IDs, status members, and message numbers. This is an optional component and not included in all architectures. The ADM program is located on a separate PC Server that runs Window Server 8 R2 Standard (64-bit) operating system. A network is required to operate ADM using standard networking techniques.

Features

The MCC 5500 dispatch console provides a comprehensive feature set as listed below.

SIGNALING: MDC, ASTRO CAI, and iDEN signaling are supported with the following capabilities:

MDC

- OUTBOUND MESSAGES
  - Call Alert
  - PTT ID
  - Radio Check
  - Radio Disable
  - Radio Enable
  - Radio Status Request
  - Remote Monitor
- INBOUND MESSAGES
  - Call Alert
  - Emergency Alarms
  - Emergency Call
  - PTT ID
  - Radio Message
  - Radio Status

ASTRO

- OUTBOUND MESSAGES
  - Call Alert
  - PTT ID
  - Radio Check
  - Radio Inhibit
  - Radio Status Request
  - Radio Uninhibited
  - Remote Monitor
- INBOUND MESSAGES
  - Call Alert
  - Emergency Alarms
  - Emergency Call
  - PTT ID
  - Radio Message
  - Radio Status
  - Status Query Response

iDEN

- OUTBOUND MESSAGES
  - Call Alert Encode
  - Emergency Call Encode
  - Group Call
  - Private Call
  - Outbound PTT ID
- INBOUND MESSAGES
  - Call Alert Decode
  - Emergency Call Decode
  - Inbound PTT ID
  - Private Call

PAGING: Both manual and pre-programmed pages are supported with the capability of sequential checklist paging. Pre-programmed lists can be created to provide Group Paging and any pre-programmed page (single or group) can be assigned to a paging button that can be placed on the GUI. The paging formats listed below are available:

- 5/6 Tone
- 256 custom Quik-Call II Formats (Customize, Tone, Duration, Inter-Tone Gap)
- Customer Formats
- Digital Dial 1500 Hz
- Digital Dial 2805 Hz
- Quik-Call
- Quik-Call II Tone and Voice
- Quik-Call II Tone Only
- Quik-Call II Battery Saver
- Single Tone
- Touch Code (DTMF)
- Knox

PATCHING and MULTISELECT: Each operator position can support up to 11 patches and 11 multiselects, each one supporting 16 members, a resource cannot be a member of more than one active patch or multiselect.

CHANNEL CONFIGURATIONS: MCC 5500 shall support the following Channel configurations with 4 wire, 600 audio connection. All channels support analog operation with MDC signaling if configured.

Type	# TX	# TX Frequency	# RX	#RX Frequency	NOTES
R1	0	0	1	1	Receive Only
T1R1	1	1	1	1	
T2R2	1	2	1	2	2 Frequency Station
T4R4	1	4	1	4	4 Frequency Station
T8R8	1	8	1	8	8 Frequency Station
T12R12	1	12	1	12	12 Frequency Station
T14R14	1	14	1	14	14 Frequency Station
T16R16	1	16	1	16	16 Frequency Station
T22R	1	2	2	1 per RX	
T44R	1	4	4	1 per RX	Requires 8 wires minimum

In addition there will be the ability to support 6-wire T22R and 10-wire T44R configurations.

iDEN signaling was introduced in MCC 5500 Release 2.5. The MCC 5500 Console can connect to a public iDEN network via a connection to an iDEN control station (i325 or i365IS radio) via direct connect cables. Please see the Product Planner and Ordering Requirements below for more details.

BASE STATION KEYING: TRC, relay, DC (hardware option) ASTRO and Digital (SB9600) keying of channels are available. For TRC, Guard Tone levels and frequencies are configurable. For DC the current for each function is configurable, as is the type of control - pulsed or latched current.

TELEPHONY: MCC 5500 supports connection to external analog, loop-start POTS lines with Caller-ID. Also available are Flash Hook, Hold, and assisted transfer between Operator positions.

GENERAL: Channel Marker and three different Alert tones are available. There is the ability to have a configurable Talk-Extend time after the Alert Tone has been sent. If the channel that the Channel Marker or Alert Tones are being sent out on is part of an active patch, all channels within the patch will transmit the Channel Marker or Alert Tone.

For Radio resources parallel status will be maintained among the Operator positions for frequency, PL, repeater ON/OFF, Repeat-Through-Console, Wild Cards I/II, and common I/Os. Main/Standby (2w and 4w) via relays is supported, as is Main/Alternate.

MCC 5500 RELEASE 2.7 - NEW FEATURES / ENHANCEMENTS:

- **APX 7500 Consolette with ACIM link support of 255 modes / frequencies** - increased the number of supported modes / frequencies from 16 to 255 when connected to an APX 7500 Consolette via ACIM link.
- **APX Mobile in Tray (O5 Control Head, Remote Mount) using SB9600** - virtual control head support of the APX 7500 Mobile in a tray (O5 Control Head, Remote Mount) using SB9600, similar to the digital interface between the MCC 5500 and the XTL 5000 W9 Consolette. The MCC 5500 Dispatch Console mimics the APX 7500 Mobile (O5 Control Head, Remote Mount) and the keypad microphone..
- **Multi-Touch Monitor Support** - on Window 7 (32-bit) and Windows 8 OS. .
- **Microsoft Windows 8 OS (64-bit) Support** - in addition to Windows 7 Professional SP1 (32-bit) OS.
- **Support for New Docking Format** - R2.7 now supports docking windows framework that provides a user with Supervisor access with more flexibility in setting up how the dispatch console user workspace is composed and displayed to the dispatch console user.

- For more information on the MCC 5500 Release 2.7 features, please refer to the MCC 5500 Product Planner.

PLEASE NOTE:
ADM: The ADM application post Release 2.5 is no longer dependent on the Microsoft SQL Server or MSDE to manage

the Caller ID database. Consequently, the MCC 5500 will no longer continue to support the SQL Server.
Please note that legacy MCC 5500 systems may continue to use Microsoft SQL Server 2005; however, the MCC 5500 is not certified with Microsoft SQL Server 2008.

INFORMATION ASSURANCE (IA):Windows PC Operating System Hardening is available for MCC 5500 for PCs purchased from Motorola. If IA is required, element hardening must be applied to every box (Op PCs, CSDM PC, ADM PC). MCC 5500 offers two types of IA Hardening CDs depending on OS version: IA Transparent CD or IA Full Hardened CD. NOTE: Customers who desire information assurance should not utilize the ADM program or the domain controller, as these programs have not verified to be IA compliant.

Manuals
The following Manuals are available from AAD:

6881005Y60	User Guide
6881005Y65	Installation and Service Manual
6881005Y70	Configuration Manual
6871013P84	Windows Supplemental Configuration Manual

Soft copies are also available on the Motorola Online or from the ASTRO 25 Documentation Web Site.

Ordering Requirement

SUPPORTED ORDERING SYSTEMS:

Going forward, MCC 5500 systems must be ordered using the REC Tool (Motorola Configurator). The iMPACT design tool cannot support configuration for Release 2.5 or greater systems.

DON'T FORGET:

The MCC 5500 does not ship with Punch Blocks or cables as standard, these should be ordered as required.

ORDERING REQUIREMENTS WHEN USING APX 7500 CONSOLETTE VIA ACIM --- WITH THE MCC 5500 DISPATCH CONSOLE :
The MCC 5500 Dispatch Console R2.6 or greater supports the APX 7500 Consolette via digital control (ACIM).
In this configuration the dispatcher will have the following capabilities at the MCC 5500 Dispatch Console Operator Position:

- Channel Select Mode (maximum is 255)*
- PTT ID
- Emergency Alarm
- Emergency Call
- Aliasing of IDs
- Coded/Clear
- Encryption Key (CKR) Select
- Frequency Select
- Call Alerts (Conventional Only)

* NOTE: Support of 255 modes / frequencies is available in MCC 5500 R2.7 or greater.

For this configuration the following is required:

1. APX 7500 Consolette requires option G806 (ASTRO Digital Operation) and if required GA00469AA for extended dispatch operation.
2. MCC 5500 Dispatch Console System must be running at release R2.6 or greater.
3. MCC 5500 DAP II (L3550 or L3551) with ASTRO DAP iButton (TT05249AA or DDN9681) and channel must be configured in the CSDM for ASTRO signaling.

4. 2 custom cables are required to go from the punch block to the RJ45 on the APX 7500 Consolette. The 2 custom cables must be made in the field. Each of the custom cables consists of a CAT5 cable, terminate one end in a standard RJ45 connection and strip the other end to go to the punchblock. For cable specifications on the 2 custom cables please refer to the MCC 5500 Dispatch Console Installation and Service Manual Revision (221560G-10) contained on MOL under the Resource Center / Product Information / Manuals / Dispatch Consoles / MCC 5500 Dispatch Console.

ORDERING REQUIREMENTS WHEN USING APX 7500 MOBILE IN A TRAY (O5 CONTROL HEAD / REMOTE MOUNT) --- WITH THE MCC 5500 DISPATCH CONSOLE :

The MCC 5500 Dispatch Console R2.7 and beyond supports the APX 7500 Mobile in a Tray (O5 Control Head, Remote Mount). However, in this configuration the use of a Digital Junction Box (DJB) is not supported only direct connection is supported.

In this configuration the MCC 5500 Dispatch Console acts a Virtual Control Head for the APX 7500 Mobile in a Tray (O5 Control Head, Remote Mount) supporting the following features:

- ASTRO IDs
- All mode changes
- All soft keys programmed on the radio
- PTT ID or Alias will display in the Activity Log Window

NOTE: In this configuration, all decoding of MDC 1200 and ASTRO IDs is done at the radio and not the MCC 5500 Dispatch Console. The MCC 5500 Dispatch Console will only display what is displayed on the control head of the radio.

For this configuration the following is required:

1. APX 7500 Mobile required options: G67 (Remote Mount) -- must have.
2. APX firmware R10.00.00 or greater
3. MCC 5500 Dispatch Console R2.7 or greater
4. MCC 5500 DAP II (L3550 or L3551) with SB9600 iButton (TT05248AA or DDN9680)
5. APX Direct Connect Cable (DDN1463)

IMPORTANT NOTE: The APX 7500 Mobile dash-mount configuration is NOT supported with the MCC 5500. The O5 Control Head (G442) is optional and not required for connecting to the MCC 5500.

ORDER INSTRUCTIONS FOR APX 7500 MOBILE IN A TRAY (REMOTE MOUNT) to be used with the MCC 5500 Dispatch Console:

1. **Main Model** - Select any Mid Power APX 7500 Mobile
2. **Operation Mode** - Select either Operation Mode option, G241 or G806
3. **System Enhancement Software** - Select the corresponding software option to match your system.
4. **Control Head Hardware** - Select G88 - APX NO O5 CH NEEDED.
   Note: G442 - APX O5 CONTROL HEAD can be ordered for visual use of the control head but is not required for connecting to a MCC 5500.
5. **Control Head Software** - Select G444 - CONTROL HEAD SOFTWARE
6. **Mounting** - Select G67 - REMOTE MOUNT MID POWER
   Note: The remote mount mobile is the only configuration for use with the MCC 5500.
7. **RF Antenna** - Select appropriate antenna option.
   Note: G89 - NO RF ANTENNA NEEDED should be ordered if G88 selected in Step 4
8. **Microphone** - Select appropriate microphone option.
   Note: G90 - NO MICROPHONE NEEDED should be ordered if G88 selected in Step 4
9. **Speakers** - Select appropriate speaker option.
   Note: G142 - NO SPEAKER NEEDED should be ordered if G88 selected in Step 4
10. **Order power supply for mobile** - HPN4007C
    Note: The power supply is not included with the mobile, this part must be ordered separately.
11. **Order cable to connect radio to control head** - HKN6170B
    Note: This cable should be ordered only if G442 is selected in Step 4

ORDERING iDEN INTERFACE:

On a New MCC 5500 System

One i325 or i365IS radio is required for each iDEN channel to be interfaced. Also, one of each in the below table is required. The only exception to this rule is the iDEN iButton (TT05245AA), which can support up to two iDEN channels.

2 iDEN Channels with License	TT05245AA
Radio Audio Cable	DDN9648A
Audio Interface Board	QTN6050C
RS232 Data Cable	NNTN5406B (available thru Tessco)
Rapid Power Charger	NNTN4963B
Audio Cable and Audio/Data Cable Kit	DDN9659A

On an Existing MCC 5500 System

Existing MCC 5500 Consoles may add an iDEN interface as long as DAP II modules are used. The MCC 5500 must be running CSDM software at R2.5 version or greater.

One i325 or i365IS radio is required for each iDEN channel to be interfaced. Also, one of each in the below table is required. The only exception to this rule is the iDEN iButton (DDN9658), which can support up to two iDEN channels.

Spare 2 iDEN Channels with License	DDN9658
Radio Audio Cable	DDN9648A
Audio Interface Board	QTN6050C
RS232 Data Cable	NNTN5406B (available thru Tessco)
Rapid Power Charger	NNTN4963B
Audio Cable and Audio/Data Cable Kit	DDN9659A

Please see the Ordering Guidelines in the Product Planner for more details.

CANCELLATION INFORMATION - REGARDING iBUTTONS:

Effective Sep 23rd, 2009, the iButton options for the MCC 5500 Dispatch Console were replaced. The iButtons in R2.5 changed so the part #'s for the iButton Options and Spares differ from those of past releases (R2.0 thru R2.4.1).

Take special care when ordering iButton spares as the former iButtons will be offered for a limited time through AAD in parallel with the current iButtons. See below for more details.

IMPORTANT NOTE REGARDING iBUTTONS:

The CSDM software (R2.5 or greater) is compatible with the old version of iButtons. So there is no need to replace old iButtons with new iButtons when upgrading to the latest release (R2.7).

Previous software versions (R2.0 thru R2.4.1), however, do not support the new iButtons. If new iButtons are installed, the system must be upgraded to the latest release (R2.7).

For this reason, if adding on an operator position to an existing system (R2.0 thru 2.4.1) and the new iButtons (R2.5 or greater) are ordered, an upgrade to the latest release (R2.7) software is required. First upgrade the system, then connect the add-on operator position.

INSTRUCTIONS ON ORDERING iBUTTONS FOR NEW MCC 5500 SYSTEMS OR ADDING ON TO FIELDED MCC 5500 CONSOLE (R2.5 or greater):

Ordering iButtons for a brand new MCC 5500 Dispatch Console system (R2.5 or greater) - below are the iButton options that are available to order with either L3550 or L3551:

2 Analog Channels with License	TT05247AA
2 SB9600 Channels with License	TT05248AA
2 ASTRO Channels with License	TT05249AA
2 iDEN Channels with License	TT05245AA

Ordering SPARE iButtons - below are the R2.5 or greater (New) iButton Spares that are used with either L3550 or L3551

2 Analog Channels with License	DDN9679
2 SB9600 Channels with License	DDN9680
2 ASTRO Channels with License	DDN9681
2 iDEN Channels with License	DDN9658

INSTRUCTIONS ON ORDERING PRE-R2.5 i-BUTTONS FOR FIELDED MCC 5500 DISPATCH CONSOLE FOR PAST RELEASES (R2.0 thru 2.4.1):

If the fielded MCC 5500 Dispatch Console System is pre-Release 2.5 (R2.0 thru R2.4.1) than below are the steps that need to taken to add additional DAPs to the fielded system without having to upgrade the system to the latest release (R2.7).

1. Order the DAP II Module - Two different DAP modules are available depending on whether or not the customer uses DC-Control

- L3550 - DAP II Module for Non-DC Control
- L3551 - DAP II Module for DC Control --- requires option TT04090AA

2. Order the PreR2.5 iButtons Spares from AAD - see part #'s below

2 Analog Channels with License	DDN7933
2 SB9600 Channels	

with License	DDN8242
2 ASTRO Channels with License	DDN8243

HOW TO CHECK FIELDED DISPATCH CONSOLE SOFTWARE VERSIONS:

The best way to find out what software version the fielded MCC 5500 Dispatch Console is currently at is thru the CSDM software. Within the CSDM software pull down "Help" and select "About". There will be a number of software version numbers displayed. Checked the software versions against the table below:

MCC 5500 RELEASE #	CSDM	COP	PC CONSOLE		DAP iBUTTON TYPE COMPATIBILITY
R02.00.00	4211059-20 SR1	4211064-15 SR1	3211997-32 SR1		Pre-R2.5 iButtons
R02.01.00	4211059-28 SR1	4211064-23 SR1	3211997-40 SR1		Pre-R2.5 iButtons
R02.02.00	4211059-44 SR1	4211064-42 SR1	3211997-55 SR1		Pre-R2.5 iButtons
R02.02.01	4211059-50 SR1	4211064-49 SR1	3211997-62 SR1		Pre-R2.5 iButtons
R02.02.02	4211059-50 SR1	4211064-60 SR1	3211997-62 SR1		Pre-R2.5 iButtons
R02.02.03	4211059-68 SR1	4211064-72 SR1	3211997-62 SR1		Pre-R2.5 iButtons
R02.02.04	4211059-68 SR1	4211064-78 SR1	3211997-62 SR1		Pre-R2.5 iButtons
R02.03.00	4211059-68 SR1	4211064-80 SR1	3211997-87 SR1		Pre-R2.5 iButtons
R02.03.01	4211059-94 SR1	4211064-93 SR1	3211997-87 SR1		Pre-R2.5 iButtons
R02.04.00	4211059-106 SR1	4211064-105 SR1	3211997-104 SR1		Pre-R2.5 iButtons
R02.04.01	4211059-109 SR1	4211064-108 SR1	3211997-104 SR1		Pre-R2.5 iButtons
R02.05.00	4211059-129 SR1	4211064-127 SR1	3211997-127 SR1		Pre-R2.5 iButtons or R2.5 or greater iButtons
R02.05.01	4211059-131 SR1	4211064-129 SR1	3211997-127 SR1		Pre-R2.5 iButtons or R2.5 or greater iButtons
R02.06.00	4211059-140 SR1	4211064-138 SR1	3211997-138 SR1		Pre-R2.5 iButtons or R2.5 or greater iButtons
		4211064-			Pre-R2.5 iButtons or

R02.07.00	2.7.0.149	145 SR1	2.0.0.147		R2.5 or greater iButtons

HOW TO OBTAIN MCC 5500 SOFTWARE UPGRADES TO LATEST RELEASE (R2.7):

The upgrade to MCC 5500 R2.7 provides the latest features and support for the MCC 5500. An upgrade kit can be ordered free of charge by calling Motorola Solutions System Support Center (SSC) and opening a Software upgrade case referencing MCC 5500 R2.7. NOTE: The software upgrade kit to R2.7 is free but Motorola Solutions does NOT cover the cost to upgrade the customer's Operation System (OS) or any labor costs to perform the upgrade.

IMPORTANT NOTE: MCC 5500 Release 2.7 ONLY supports the following Operating Systems (OS):

MCC 5500 CONSOLE APPLICATIONS	MCC 5500 RELEASE 2.7 SUPPORTED OS
Console Op, CSDM - Workstations	Windows 7 Professional w.SP1 (32 bit) Windows 8 Professional (64 bit)
ADM - Server	Windows Server 2008 R2 Standard w.SP1 (64-bit)

ORDERING INFORMATION ASSURANCE FOR MCC 5500:

MCC 5500 does offer Windows PC Operating System Hardening CD Kits for Motorola supplied PCs ONLY based on OS type. Element hardening must be applied to every box in the MCC 5500 System (Console Op, CSDM, ADM). The table below summarizes the IA Hardening CD based Applications and OS.

IA HARDENING CDS	SUPPORTED OS	IA HARDENING CD COMPLIANT ONLY WITH MOTOROLA SUPPLIED PC	MCC 5500 CONSOLE APPLICATIONS
TT2483 IA Transparent CD	Windows 7 Professional w.SP1 (32 bit) Windows Server 2008 R2 Standard w.SP1 (64 bit)	TT2537 - Workstation with Window 7 OS (32 bit) TT2739 - Server 2008 R2 (64 bit)	Console Op CSDM ADM
TT2482	Windows 7 Professional	TT2537 - Workstation with Window 7 OS (32	Console Op

IA Full Hardened CD	w.SP1 (32 bit) Windows Server 2008 R2 Standard w.SP1 (64 bit)	bit) TT2739 - Server 2008 R2 (64 bit)	CSDM ADM

IMPORTANT NOTE: Motorola Solutions no longer supplies PCs with Microsoft Windows Vista OS (TT2289) or Server 2003 (TT2288). The IA Hardening CDs (TT2144 or TT2145) are ONLY compliant with the following Motorola supplied PCs T2289 and TT2288. TT2385 (Z400 Workstation) was replaced with TT2537 (Z420 Workstation). TT2322 (ML110 G7 Server), TT2605 (ML310E G8 Server) were replaced with TT2739 (ML310E G8 V2 Server).

Dispatch Console System

Dispatch Console Position(s)

Each MCC 5500 Dispatch position requires a CAB (L3359) and a CES (L3358). Each CES can support up to 12 channels, if the capacity of the systems as defined by the number of dispatch console positions is not sufficient for the number of channels required, additional CES units should be ordered.

Description	Nomenclature	APC	Price
MCC 5500 OP CAB II / PS CALIFORNIA COMPLIANT	L3359AC	322	$8,433.00
Includes 10' cable connection to PC, power supply unit, and operator license. Speakers are NOT included with this model, they are to be ORDERED separately (B1912). This model is for R2.0 and beyond. NOTE: 50' Cable for CES is NO LONGER automatically included with L3359. Must order TT05088AA for the 50' Cable for CES. Note: CAB II PSU IS CALIFORNIA COMPLIANT.			
CONSOLE ELECTRONIC SHELF (CES) II	L3358	322	$9,500.00
Includes COP and power supply. This model is for R2.0 and beyond.			

CAB (L3359AC) - Cable Options

Description	Nomenclature	APC	Price
ADD: 50' CES/CAB CABLE	TT05088AA	322	$150.00
Order with L3359 to add 50' CAB/CES cable			
ADD: 100' CAB/CES CABLE	TT04083AA	322	$320.00
ORDER with L3359 to add 100' CAB/CES cable			

CAB (L3359AC) - Options

Description	Nomenclature	APC	Price
ADD: REMOTE OPERATOR OPTION	TT04080AA	322	$2,400.00
ORDER with L3359 Model.			
ADD: CAB II RACK MOUNT KIT	TT04218AA	322	$95.00
ADDS rack mounting hardware to the CAB II (L3359). CAB comes ready to install in the rack.			

CES (L3358) - Option

Description	Nomenclature	APC	Price
ADD: TWO (2) CO INTERFACE FOR TELEPHONE II	TT04213AA	322	$520.00
ORDER with L3358 Model.			

CES (L3358) - Extended Warranty Options

Description	Nomenclature	APC	Price
ENH: (2) YR EXT SVC PL A/ADV RPLCMT PER OPERATOR POSTION ORDER with L3358. Provides a total of 3 years service and support on new systems with advanced replacement. Service Plan covers all components of the operator position including CES, CAB, Speakers, Microphone, Headset Jackboxes and Footswitch. Does not include PC, Monitor or Headsets.	CA00957AA	150	$900.00
ENH: (2) YR EXT SVC PL A/ADV RPLCMT ON EACH ADDITIONAL CES ORDER with L3358. Provides a total of 3 years service and support on new systems with advanced replacement for CES with no CAB.	CA00958AA	150	$485.00

I/O Shelf

Description	Nomenclature	APC	Price
MCC SERIES I/O SHELF W/ CONTROLLER & CABLE Includes 12 Inputs and 6 Outputs. Additional I/O modules (TT04532AA) can be added (up to 3).	L3468	322	$1,100.00
ADD: MCC SERIES I / O MODULE II ORDER with L3468 Model. Includes 12 Inputs and 6 Outputs.	TT04532AA	322	$800.00

DAP II Modules - Channels

Each CES can support up to 3 DAP II Modules.

DAP II Modules

Description	Nomenclature	APC	Price
DAP II FOR ANALOG,SB9600,ASTRO INTERFACES,INCL 2 ANALOG LICENSES Includes 2 analog licenses. Supports up to 4 channels, to add more than 2 analog channels must add options from Channel Capacity section below. IMPORTANT NOTE: L3550 replaced L3427 for non-DC control capable DAP II module. L3550 is not compatible with TT04090AA.	L3550	322	$2,300.00
DAP II FOR DC CONTROL CHANNEL INTERFACE ONLY Includes 2 analog licenses. Supports up to 4 channels, to add more than 2 analog channels must add options from Channel Capacity section below. IMPORTANT NOTE: L3551 replaced L3427 (DC control capable DAP II module). L3551 requires TT04090AA.	L3551	322	$2,300.00
ADD: DC CONTROL MODULE (4 CHANNELS) REQUIRED when ordering L3551; Supports 4 DC Channels. Order additional channel options if more than 2 analog channels are desired. (Note: Not compatible with L3550)	TT04090AA	322	$750.00

DAP II Module - Channel Options

Each DAP II module is capable of supporting up to four channels if equipped with the licensing iButtons required to enable all the channels. By default the DAP II module contains NO i-Buttons and supports ONLY two conventional analog channels. Select options below to add-on additional channel capacity to each DAP II module.

Description	Nomenclature	APC	Price
ADD: 2 ANALOG CHANNELS WITH LICENSE R2.5 Order with L3550 or L3551 - adds two further analog channels (licenses included)	TT05247AA	322	$2,000.00
ADD: 2 SB9600 CHANNELS WITH LICENSE R2.5 ORDER with L3550 or L3551 - adds two SB9600 channels, or changes default analog channel to SB9600 (licenses included) SB9600 channel can also be configured as SB9600 or analog.	TT05248AA	322	$2,300.00
ADD: 2 DIGITAL CHANNELS WITH LICENSE R2.5 ORDER with L3550 or L3551- adds two Digital (ASTRO) channels, or changes default analog channel to Digital(licenses included) Digital channel can also be configured as SB9600 or	TT05249AA	322	$2,500.00

analog.			
ADD: 2 IDEN CHANNELS WITH LICENSE R2.5 ORDER with L3550 or L3551 - adds two iDEN channels, or changes default analog channel to iDEN(licenses included) iDEN channel can also be configured as Digital, SB9600, or analog.	TT05245AA	322	$2,700.00

Console System Software

Software

Every MCC 5500 system requires configuration, management and application software and is delivered as a single package in the CSDM program package (DDN6916). The CSDM program package includes all the software required by the MCC 5500 Dispatch Console, excluding OS, on a single CD.

Description	Nomenclature	APC	Price
CSDM PROGRAM System CD contains all system software and systems manuals (hard copy)	DDN6916	322	$2,000.00

Cable for CSDM Computer

Description	Nomenclature	APC	Price
CSDM COMPUTER CABLE (DB09) 25 FEET Required cable for CSDM Programming Software (DDN6916).	DDN6924	322	$90.00

PC Equipment

Workstation

Description	Nomenclature	APC	Price
Z420 LOW TIER WORKSTATION WINDOWS 7 Certified Windows 7 computer for use with the MCC 5500 console. Provides a HP Z420 computer with the Windows 7 (32 bit) operating system, a keyboard and a mouse. Does not include a monitor or any application software. May be used with the ZA00268AB option to add a sound card and speakers for IRR use.	TT2537	708	$2,550.00
ADD: DUAL IRR CARD & PC SPKER This option adds the PCI Express X-Fi Xtreme Fidelity sound card.	ZA00268AB	708	$189.00

Server

Description	Nomenclature	APC	Price
ML310E GEN8V2 SERVER WINDOWS SERVER 2008 R2 (SP1 64-BIT)	TT2739	708	$5,000.00

Information Assurance (OS Hardening CDs)

(NOTE: The OS Hardening CDs offered below are only compatible with the following PCs: TT2537, TT2739)

Description	Nomenclature	APC	Price
IA TRANSPARENT CD - (USE WITH MCC 5500 WINDOW 7 & SERVER 2008 R2 OS) TT2483 is ONLY compliant with Motorola Supplied PC (TT2537, TT2739) for use with MCC 5500 Dispatch Consoles ONLY.	TT2483	322	$50.00

IA FULL HARDENED CD (USE WITH MCC 5500 WINDOW 7 & SERVER 2008 R2 OS) TT2482 is ONLY compliant with Motorola Supplied PC (TT2TT2537, TT2739) for use with MCC 5500 Dispatch Consoles ONLY.	TT2482	322	$50.00

Dispatch Console Position - Audio Accessories

The CAB (L3359AC) does not include any accessories, these must be ordered separately.

Description	Nomenclature	APC	Price
MCC SERIES DESKTOP SPEAKER Provides one desktop style speaker. Includes speaker with master volume control, 10 foot cable and mounting hardware. Compatible for use near CRT monitors.	B1912	443	$450.00
MCC SERIES HEADSET JACK Provides one headset jack. Includes separate volume controls for radio and telephone audio, a 6 foot permanently attached cable and a 6 foot extension cable. Ships from the factory configured for use with 6-wire headsets. Can be field-modified to work with 4-wire headsets.	B1913	443	$200.00
MCC SERIES DESKTOP GOOSENECK MICROPHONE Provides one desktop style microphone. Includes transmit and monitor buttons, an 18" gooseneck shaft and a 10 foot cable. Compatible for use near CRT monitors.	B1914	443	$250.00

Link to MCC Series Console Accessories

Cables

T3 Cables to Connect to CES Shelves

Each CES requires a T3 cable. The particular cable depends upon the number of CES shelves in the system and the distance between them.

Description	Nomenclature	APC	Price
T3 CABLE 2 FEET This T3 cable is used to connect CES shelves together between adjacent shelves in a rack.	DDN6918	322	$180.00
T3 CABLE 5 FEET This T3 cable is used to connect CES shelves together between shelves in a rack.	DDN6919	322	$200.00
T3 CABLE 10 FEET This T3 cable is used to connect CES shelves together between shelves in adjacent racks.	DDN6920	322	$250.00
T3 CABLE 25 FEET This T3 cable is used to connect CES shelves together between shelves in a non-adjacent rack.	DDN6921	322	$300.00

Cables to Connect to CES to CAB

Description	Nomenclature	APC	Price
CES/CAB CABLE 50 FOOT	DDN6917	322	$175.00
CES/CAB 100 FOOT CABLE	DDN7094	322	$420.00
CES/CAB CABLE 200 FOOT	DDN1051	322	$563.00
CES/CAB CABLE 300 FOOT	DDN1052	322	$640.00
CES/CAB CABLE 500 FOOT	DDN1053	322	$1,175.00
CES/CAB PLENUM CABLE 50 FOOT	DDN1054	322	$358.00
CES/CAB PLENUM CABLE 100 FOOT	DDN1055	322	$740.00
CES/CAB PLENUM CABLE 200 FOOT	DDN1056	322	$1,450.00
CES/CAB PLENUM CABLE 300 FOOT	DDN1057	322	$2,160.00
CES/CAB PLENUM CABLE 500 FOOT	DDN1058	322	$3,590.00

Cables to Connect to CES to Punch Block

Punch blocks and cables should be ordered as required on a per CES shelf basis.

Description	Nomenclature	APC	Price
TELCO 15 FT 50 WAY CABLE, 180 DEG MALE - 90 DEG MALE, .35 INCHSCREW	DDN9994	207	$60.00
Cable to connect CES to Punchblock. IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			
TELCO 25 FT 50 WAY CABLE, 180 DEG MALE - 90 DEG MALE , .35 INCHSCREW	DDN9995	207	$69.00
Cable to connect CES to Punchblock IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			
TELCO 50 FT 50 WAY CABLE, 180 DEG MALE - 90 DEG MALE , .35 INCHSCREW	DDN9996	207	$110.00
Cable to connect CES to Punchblock IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			
TELCO 15 FT 50 WAY PLENUM CBL, 180 DEG MALE - 90 DEG MALE, .35IN SCREW	DDN9997	207	$57.00
Cable to connect CES to Punchblock IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			
TELCO 25 FT 50 WAY PLENUM CBL, 180 DEG MALE - 90 DEG MALE, .35IN SCREW	DDN9998	207	$80.00
Cable to connect CES to Punchblock IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			
TELCO 50 FT 50 WAY PLENUM CBL, 180 DEG MALE - 90 DEG MALE, .35IN SCREW	DDN9999	207	$180.00
Cable to connect CES to Punchblock IMPORTANT NOTE: The screw length of this cable changed from .750 inches to .350 inches.			

Radio Cables

Description	Nomenclature	APC	Price
CONSOLETTE W9 DIRECT CONNECT CABLE	DDN8351	454	$100.00
CDM1550 SERIES DIRECT CONNECT CABLE	DDN8352	322	$100.00

Field Add-Ons / Spares

Description	Nomenclature	APC	Price
CAB/PC USB CABLE	DDN7527	322	$35.00
MCC5500 SPARES PACKAGE / CAB II PS CALIFORNIA COMPLIANT	DDN8349AC	322	$14,483.00
Package includes: CAB II board, CES PSU; CAB II PSU; COP II, DAP II (including 2 analog licenses), Fuse Kit, Replacement I/O shelf, Replacement I/O controller, Replacement I/O module. Note: CAB II PSU IS CALIFORNIA COMPLIANT			

Data Compiled 02-Feb-2015 using DUP and all prices in USD

MCC 7500, MCC 7100, MCC 5500 and MIP 5000 Consoles
Computer Hardware Options and Accessories
RF-Certified LCD Monitors (Touch and Non-Touch)

Ship Card

Models, Options, Accessories, and FRU's

CLIENT WORKSTATION MODELS

Z420 LOW TIER WORKSTATION WINDOWS 7	TT2538	708	$2,550.00
Provides a HP Z420 computer with the Windows 7 (64 bit) operating system, a keyboard and a mouse. Does not include a monitor or any application software. Not compatible with GPIOM based MCC 7500 consoles (it doesn't have enough PCI slots and doesn't support Vista or XP O/Ss).Does not support Hardware Encrypt Key Mgmt on MCC 7100.			

For PC Anywhere information see the Network Security ECAT pages.

CLIENT OPTIONS

ADD: DUAL IRR CARD & PC SPKER	ZA00268AB	708	$189.00
This option adds the PCI Express X-Fi Xtreme Fidelity sound card.			

SERVERS

The ML 110-G6 WITH WIN2003 SERVER (DDN1065) is no longer available. Customers looking to replace a WIN2003 SERVER will have to upgrade to WIN2008 SERVER.

The ML110-G7 WITH WIN2008 SERVER (TT2322) and the ML310e Gen8 WIN2008 SERVER (TT2605) are no longer available. Please use the ML310E GEN8V2 SERVER WINDOWS SERVER (TT2739).

Description	Nomenclature	APC	Price
ML310E GEN8V2 SERVER WINDOWS SERVER 2008 R2 (SP1 64-BIT)	TT2739	708	$5,000.00

Client Access Licenses

Description	Nomenclature	APC	Price
ADDITIONAL 5 CLENT ACCESS LICENSES / WINDOWS/ 0 SERVER (NO MEDIA)	L3235	708	$290.00
20 CLENT ACCESS LICENSES / WINDOWS SERVER (NO MEDIA)	L3236	708	$1,165.00

Monitors

- All monitors are RF-CERTIFIED by Console Engineering and are suitable for use with MCC 7500, MCC 5500 and MIP 5000 consoles.
- All ISPO monitors are VESA compliant.
- Image retention may occur when using LCD monitors in a 24/7, no-screensaver environment.
- Please contact Shannon Fowler (847 538 0644) for more information.

STANDARD FORMAT MONITORS (4:3 Aspect Ratio)

NON-TOUCH MONITORS

Description	Nomenclature	APC	Price
17 INCH NON-TOUCH MONITOR, BLACK	DS017BLK	708	$1,180.00
19 INCH NON-TOUCH MONITOR, BLACK	DS019BLK	708	$1,520.00
Black, Std. format, 4:3 aspect ratio			

TOUCH MONITORS

Multi-touch monitors may be used with the following consoles on the specified releases. Note that the multi-touch gestures themselves are not supported. Only the legacy touch operations are supported.
MCC 7500/7100 with system release 7.13 and later
MCC 5500 with system release 2.7 and later
MIP 5000 with system release 4.2 and later

Multi-touch monitors are not supported for use with Gold Elite consoles in any system releases.

Description	Nomenclature	APC	Price
17 INCH MONITOR WITH TOUCH SCREEN, BLACK	DS017BLKTS	708	$2,134.00
ELO 1928L 19IN LCD TOUCH MONITOR, DUAL SERIAL USB CONTROLLER, GRAY	DSE686772	708	$2,340.00

WIDE FORMAT MONITORS (16:9 Aspect Ratio)

NON-TOUCH MONITORS

Description	Nomenclature	APC	Price
22 INCH WIDE NON-TOUCH MONITOR, BLACK	DS22WBLK	708	$3,299.00
Black, Wide format, 16:9 aspect ratio			

TOUCH MONITORS

Multi-touch monitors may be used with the following consoles on the specified releases. Note that the multi-touch gestures themselves are not supported. Only the legacy touch operations are supported.
MCC 7500/7100 with system release 7.13 and later
MCC 5500 with system release 2.7 and later
MIP 5000 with system release 4.2 and later

Multi-touch monitors are not supported for use with Gold Elite consoles in any system releases.

Description	Nomenclature	APC	Price
22 INCH WIDE WITH TOUCH SCREEN MONITOR, BLACK	DS22WBLKTS	708	$4,100.00

MOUSE/TRACKBALL (ACCESSORIES)

Description	Nomenclature	APC	Price
TRACKERBALL (ONLY PS/2 & USB COMPATIBLE)	DSCDN6171B	708	$439.00
Trackball is "ruggedized" and "RF-CERTIFIED" by Consoles Engineering. Order as a main line item.			

MISCELLANEOUS

Description	Nomenclature	APC	Price
PS/2 KEY/MOUSE EXT MINI DIN 6FT	DSPCM250006	708	$25.00
STANDARD IEC AC POWER CORD 12 FOOT	DSPWR100012	708	$20.00

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